Cypress Creek Fact Sheet

August 2006

Presented by the Tennessee Department of Health and the Tennessee Department of Environment & Conservation

★Background

Figure 1. View of concrete channel. Note the residential homes and backyards on the left just beyond the retention wall

This fact sheet has been prepared by the Tennessee Department of Environment & Conservation and the Tennessee Department of Health to address concerns about possible pesticide contamination along the banks of Cypress Creek in Memphis, TN. Cypress Creek surfaces near the center of Memphis and runs northwest through industrial and residential areas for 8 miles where it empties into the Wolf River.

Prior to 1963, industries, including Velsicol Chemical Corporation, discharged wastewater into the creek. In the 1960s, a concrete liner was installed and the creek channel was straightened. During the construction of the liner, some sediment from the bottom of the creek was placed along the banks and used to fill in low spots near the creek. Sediment was also placed in the backyards of homes. Since the creek received industrial wastewater, some of the sediment that was used as fill was contaminated.

★Introduction

In March 2005, the Memphis and Shelby County Health Department (MSCHD) and the Tennessee Department of Environment and Conservation (TDEC) requested assistance from the Tennessee Department of Health (TDH). TDH was asked to examine the possible exposure and risk to people living next to and near Cypress Creek. TDH published a report called a Health Consultation that has been reviewed by the federal Agency for Toxic Substances and Disease Registry (ATSDR). This fact sheet summarizes the health consultation. If you would like a copy of the full report, please call 1-800-404-3006 and ask to speak with Environmental Epidemiology (EEP) or visit the TDH Website at www.tenneessee.gov/health and search for *Environmental Epidemiology.*

★Sub-Areas

Please refer to the map on page 4 to locate Sub–Areas III, IV, & V.

Sub–Area I: The industrial areas outside of the channel from Scott Street to 200 feet downstream of Jackson Avenue.

Sub–Area II: The channel bottom under the concrete liner from Scott Street to Evergreen Street.

★Sub-Areas (continued)

Sub–Area III: The predominantly residential area adjacent to the channel, from 200 feet downstream of Jackson Avenue to Evergreen Street. The Health Consultation report focused on sampling and analysis of soil in Sub-Area III.

Sub–Area IV: The open space area from Evergreen Street to Chelsea Avenue, including the Upper Surge Basin

Sub–Area V: The open space from Chelsea Avenue to the Wolf River, including the Lower Surge Basin.

★Soil Samples

- There are about 170 residential properties next to or near the creek in Sub–Area III. 129 of these properties have been sampled.

- Velsicol Chemical Corporation performed soil investigations along Cypress Creek. The soil investigations were conducted in order to determine where chemical contamination is located. Cypress Creek was divided into five sub-areas for sampling purposes. These sub-areas were designated by creek channel conditions, adjacent land use, and possible human exposure to contaminated sediments.

★What were the chemicals of concern in the soil?

Tennessee Department of Health identified the following cyclodiene pesticides as chemicals of concern to investigate further:

- Aldrin
- Dieldrin
- Endrin and endrin-like chemicals

If you would like more detailed information about each of these chemicals, please refer to the Health Consultation report.

★How was the risk from chemicals evaluated in the Health Consultation report?

A dose is the amount of a chemical that gets into a person. The doses of chemicals in the soil were compared to a dose that causes no adverse effects (NOAEL) by dividing the NOAEL by the dose of the chemicals in the soil. The answer is called a margin of safety (MOS). If the MOS is greater than 1000, the concentration of the chemical is definitely safe. If the MOS is less than 10, the concentration of the chemical is probably unsafe. For those properties with an MOS between 10 and 1000, more work had to be done to tell if the concentration of chemicals was safe or unsafe.

★What did TDH find?

Tennessee Department of Health concluded that:

- Pesticides in most yards are not a health hazard.
- Pesticides in some yards may have presented a health hazard in the past and may be a hazard now and in the future.

★What does TDH recommend?

- The Tennessee Department of Environment and Conservation, U.S. Environmental Protection Agency Region 4, Memphis and Shelby County Health Department, Tennessee Department of Health, and other appropriate parties should continue to work together to insure that cleanup of properties requiring remediation takes place as quickly as possible.

- All areas that may have been filled with Cypress Creek sediment should be identified and evaluated.

★What is next?

- Velsicol will continue to work to get access to the properties where it is determined that pesticide contamination is at an unsafe level. Where Velsicol can get access to those properties Velsicol will remove 15 inches of contaminated soil, place a marker to delineate the point between clean soil and contaminated soil and backfill with clean top soil and sod where applicable. Velsicol will landscape the property as agreed upon between Velsicol and the property owner. The contaminated soils excavated by Velsicol will be moved to Velsicol property, where the contamination originated. It will be disposed of later.

- Once all Residential properties have been addressed then Velsicol must address non-residential properties along Cypress Creek.

★Do you have more questions? Here are some contacts.

The Tennessee Department of Health
Environmental Epidemiology
Phone: 1-800-404-3006

The Tennessee Department of
Environment & Conservation
Solid Waste Management
Phone: 1-901-368-7939

For more information about Environmental Health, visit the TDH Website at www.tenneessee.gov/health and search for *Environmental Epidemiology* or call EEP at 1-800-404-3006

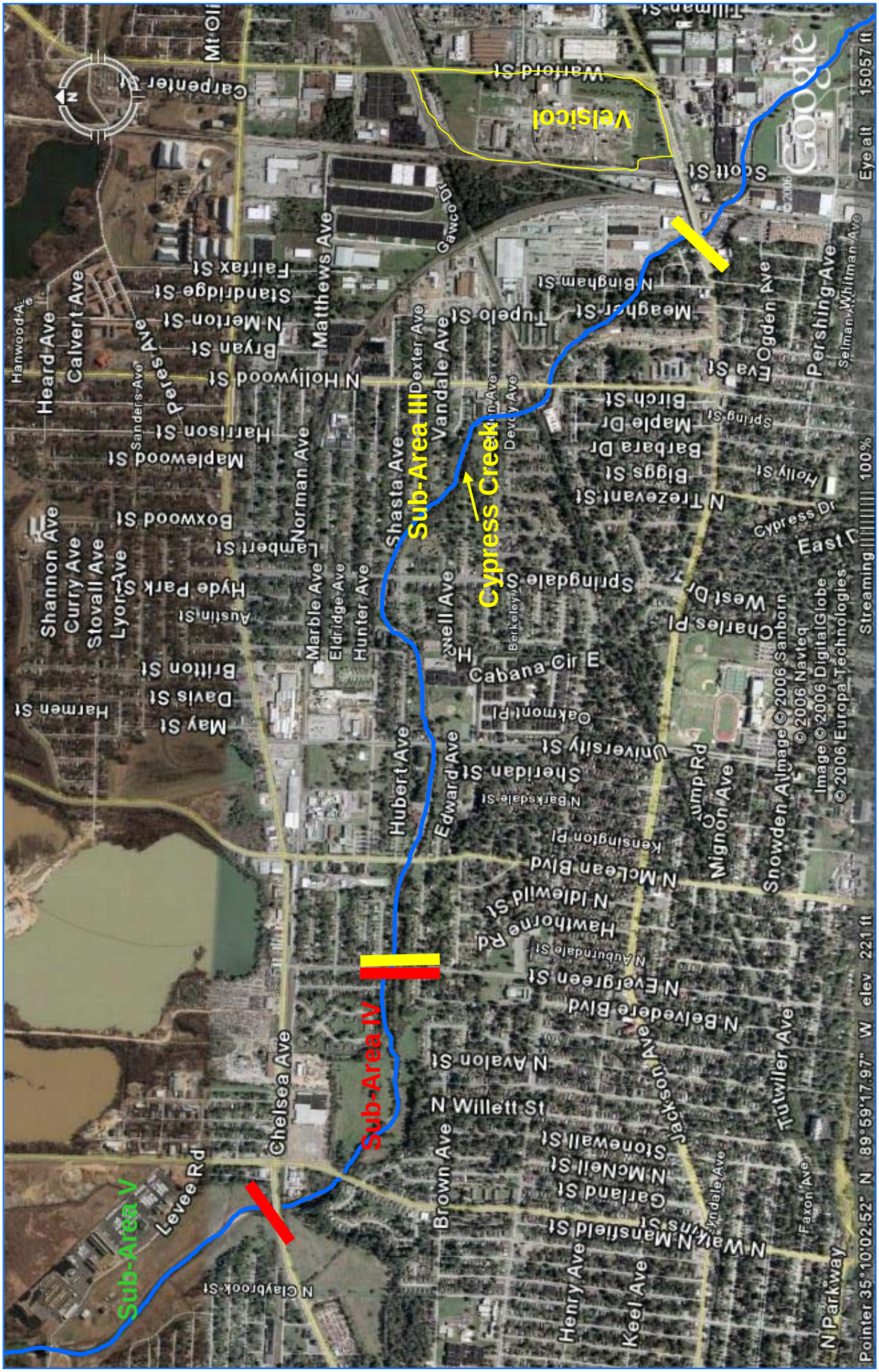

Figure 2. Map of Sub-Areas III, IV, & V.